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ABSTRACT

Trends in violence in television drama were measured over a seven-year period climaxing with 1973-1974. About 70 percent of programing in 1973 contained violent episodes, as opposed to 80 percent in 1967. However the proportion of domestic crime programs increased, while programs of historic or exotic episodes declined, so that violence was increasingly depicted as occurring in present society. The number of violent episodes per hour was gauged at about eight for cartoons. Violence rates for Westerns were also measured. Types of persons most frequently shown as victims were tabulated. The relative violence rates for each of the three networks were charted. Tables showing each trend were prepared, along with those showing involvements in violence and risks for different groups. Other tables depicted those who watch violent programs by years of education, newspaper readings, and other indexes. (DGC)

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PART I

THE RESEARCH AND ITS FINDINGS

The Violence Profile is a set of multidimensional indicators of television content and its correlates in viewer conceptions. Its purpose is to measure trends in the frequency, nature, functions and effects of dramatic programming containing violence. These measures are designed to track the implementation of television program policies and to test their consequences.

The long-run serviceability of indicators of cultural trends depends on their salience to policy issues and on the soundness of the research upon which they are based. Part I of this report begins with a brief account of the development of the violence profile in response to national policy needs, and of the theoretical considerations underlying its conceptual and methodological approach. The second section of Part I describes in some detail the analytical procedures and methodologies of the two types of research on which the violence profile is based. This two-pronged approach, inquiring into both "content" and "effects" on related terms, is a key feature of the research leading to the Violence Profile. The two types of research will be described as "message system analysis" and "cultivation analysis," respectively. Their results are also summarized in the second section of Part I.

The complete report includes two additional parts. Part II contains the full tabulations on which the discussion and interpretation of findings (in Part I) is based. Four series of tables contain the findings of the message system analysis from 1967 through 1973 and of the cultivation analysis for 1973-74. Part III contains a series of figures based on selected tabulations from

Part II, illustrating trends in the violence index and in other components of the violence profile.*

(1) DEVELOPMENT AND THEORY

The continuing research from which this report is drawn has investigated the extent, nature, and symbolic functions of violence in network television drama since 1967. A study of viewer conceptions of social reality began in 1973.

The research was initiated under contract with the National Commission on the Causes and Prevention of Violence. The 1967-68 findings were published in the report of the Commission's Mass Media Task Force (Violence and the Media by Robert K. Baker and Sandra J. Ball, U.S. Government Printing Office, Washington, D.C., 1969). The 1969 and 1970 research was conducted under the sponsorship of the Surgeon General's Scientific Advisory Committee on Television and Social Behavior. The 1967-69 findings appeared under the title "Violence in Television Drama: Trends and Symbolic Functions" in Volume I of the report to that Committee (Television and Social Behavior; Media Content and Control, edited by George A. Comstock and Eli A. Rubinstein, U.S. Government Printing Office, Washington, D.C., 1972). The term, concept, and measures called Violence Index first appeared in our chapter (p.34, ff.) in that volume.

A conference of research consultants to the National Institute of Mental Health met on June 2, 1972 to discuss measures of televised violence. The conference recommended broadening the scope of the research and constructing a profile that "would take account of the social relationships portrayed by

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*Copies of Parts II and III may be obtained by sending the principal investigators a check or money order for $12.00 made out to the Trustees of the University of Pennsylvania.

the violence. . . and the correlation of known viewing patterns of target audiences. . ." We proceeded to implement that recommendation and issued the first Violence Profile (the fifth in our series of reports) in June 1973. Secretary of Health, Education and Welfare Casper W. Weinberger noted in his November 13, 1973 reply to Senator Pastore's query of October 8 that our research was "broadened to encompass a number of additional dimensions and linked with viewers' perceptions of violence and its effects, as recommended by NIMH consultants and as incorporated by Dr. Gerbner in his renewal research."

The "renewal research" to which Secretary Weinberger referred is our major long-range project called Cultural Indicators, conducted under a grant from NIMH. It is designed to trace broad trends in television content and in child and adult viewer conceptions about a variety of significant issues. The Violence Profile is now a part of that project.

The data base for this research now consists of a coded and computerized archive of 717 programs (plays), 1939 leading and 5216 minor characters, and 3546 violent episodes. A continuing and cumulative analysis of trends and effects builds on that base.

Theoretical considerations

Cliches and oversimplifications have often clouded the discussion of violence on television. We believe that it is necessary and possible to provide an objective, reliable, fair, and useful guide to judgment in this area. But we think that such a guide can enrich the bases for judgment only if it recognizes, rather than avoids, the symbolic nature of the communication transaction.

The essence of symbols is that they mean something other than what they

are. The apparent realism of much symbolic representation (especially in Western cultures) should not conceal the nature of the symbolic transformation. Violence in television drama is not violent action in which people get hurt or killed. No one calls an ambulance when a television character gets shot. Relating a representation of violence only to its semantic equivalent in real life may appeal to a concern with law and order (or its oppressive enforcement) but may also distort and limit the investigation of the actual social consequences of the communication. Symbolic violence in story-telling, in ritual, in dramatic or even documentary forms, and in a great variety of stylized representations, is a <u>show</u> of force and a <u>demonstration</u> of power and authority -- both historic means of social control. The symbolic representation of violence is also communication about social relationships and human types, about goals and means, about winners and losers, about the norms of society and the price for transgression, about the risks of life, and about a variety of other messages -- most of them dealing with who gets away with what, when, how, why, and against whom, and demonstrating some aspect of social typing and the exercise of power. Victims as well as "violents" may have to learn their roles. Fear may be a more critical concomitant of a show of violence than aggression. Assumptions about life and conceptions of social reality may be more telling indicators of what violent representations cultivate than any individual behavior. Acceptance of violence and passivity in the face of injustice may be consequences of great social concern. Our research indicates that viewers come very early to understand the rules and conventions of the symbolic game, and to derive meaning from the total context and social content of the representation rather than from "the

violence" alone. Violent -- or any other -- motion divorced from its symbolic context is literally meaningless in terms of human action. The purpose of this study of dramatized violence is to develop multi-dimensional indicators of symbolic functions, social content, and viewer conceptions cultivated in the full context of the communication transaction.

Message system analysis

Large and representative aggregates of television output (rather than individual selections from it) are the system of messages to which total communities (rather than selective individuals or groups) are exposed. Message system analysis emphasizes, therefore, the gross and relatively unambiguous common features that provide bases for interaction and common assumptions and definitions (though not necessarily agreement) among large and heterogeneous mass publics.

Message system analysis has been performed on annual sample-weeks of prime time and Saturday daytime network dramatic programming since 1967 by trained analysts who observed and coded various aspects of TV content by the most reliable methods employed in any research of this kind. The definition of violence employed in this analysis was "The overt expression of physical force against self or other, compelling action against one's will on pain of being hurt or killed, or actually hurting or killing." Thus the research focused on a clear-cut and commonly understood definition of violence. The study yielded indicators of trends in the programming context in which violence occurs; in the prevalence, rate, and characterizations involved in violence; and in the power relationships expressed by the differential risks found in the "world" of television drama.

The methodology of message system analysis will be described after a brief theoretical discussion of our approach to the study of conceptions of social reality that television viewing tends to cultivate.

Cultivation analysis

Our study of effects poses the question: What common conceptions, if any, do mass-produced message systems tend to cultivate in large and heterogeneous publics?

This is a tough question, and it has never been satisfactorily answered. Previous attempts have lacked a comprehensive and cumulative data base for the study of message systems and symbolic functions. In addition, there are several specific methodological reasons for the difficulty in establishing the cultivation characteristics of television.

First, most research employs "attitude change" or some other change as the test of "effect." But we see U.S. television more as an agent of stabilization and maintenance than of change. Studies show heavy viewers of television more resistant to change. Thus the "campaign" approach is not adequate to the study of television effects.

Secondly, television is not essentially different from other forms of "mainstream" cultural entertainment. Hence we should not assume that TV cultivates conceptions easily distinguishable from those of other major entertainment media. But we cannot emphasize too strongly the historically novel role of television in standardizing and sharing with all as the common norm what had before been more parochial, local, and selective cultural patterns. We assume, therefore, that TV's standardizing and legitimizing influence comes largely from its ability to streamline, amplify, ritualize, and spread into hitherto isolated or protected subcultures, homes, nooks, and crannies of the land the conventional capsules of mass produced information and entertainment.

Finally, aggregate and common cultivation effects should be sought on the level of implicit assumptions, premises, and definitions, rather than on the much more situation-bound level of explicit conclusions and interpretations. How people construe the "facts" of a case may not lead to one specific interpretation but affect all interpretations; given a different assumption about the "facts," the range and complexion of the interpretations may also be different.

Cultivation analysis inquires into the difference in terms of stability rather than only of change, in terms of being more or less deeply immersed in the cultural mainstream in which most people swim or drift; in terms of common assumptions about basic "facts" of social reality rather than explicit, diverse, and often unstable individual conclusions or rationalizations.

Two basic methods have been utilized. One calls for semi-projective tests of imagery, mostly with children. The other uses standard survey methods, administered to both a quota and a national probability sample of adult respondents. Both methods try to create choice situations which elicit responses of two kinds: those which can be taken as consonant with the symbolic "facts" and functions found in the world of television drama (the "television answer"), and those which can be seen as more or less removed from or different from what television "teaches." The responses are then related to the nature and extent of exposure to television, controlling for other relevant aspects such as sex, age, education, etc. From these results we construct a "cultivation differential" indicating the margin of "television answers" given by heavy viewers as opposed to light viewers, in each group.

Our analysis looks at the contribution of TV drama to viewers' conceptions of the "facts of life" in conjunction with such other sources of such knowledge

as educational institutions and the news media (TV news and newspapers). The analysis is intended to illuminate the complementary as well as the divergent roles of these sources of facts, images, beliefs and values in the cultivation of assumptions about the world.

Analytical procedures and methodology

Message system analysis and cultivation analysis represent two related but different types of research. Their relationship is one of the special characteristics of the Violence Profile (and Cultural Indicators) project: instead of assuming or guessing about those conceptions of social reality to which television viewing makes significant contributions, message system analysis is used to "map" the "world" of television drama and to help formulate directions in which to test for cultivation effects.

Message system analysis

The objective of the analysis is to provide systematic, cumulative, and reliable observations representing aspects of the world of television drama salient to policy considerations and relevant to the purposes of the investigation. What is this world like, who are its people, and what are the symbolic functions and social content of violence among them? Answers to these questions yielded the basic data for the construction of indicators of trends in the dramatic context, in the prevalence, rate, and role of violence, and in the distribution of risks to different groups in the fictional population. These indicators will be described in the next section where they provide the terms of the discussion of the findings of the analysis. Here we shall present the definitions, units, samples, data collection prodedures, and reliability tests of the message system analysis.

Definition and units of analysis. The basic definition of violence, as noted before, was "the overt expression of physical force against self or other compelling action against one's will on pain of being hurt or killed, or actually

hurting or killing." The action may be "accidental" as well as portrayed in such a way as to indicate intentionality, but purely verbal gestures are not included. (In the course of years of training and reliability testing, standard procedures for the classification of a great number of dramatic situations have been developed. Information about these can be obtained from the research staff in response to specific questions.)

All observations are recorded in three types of units: the program (play) as a whole, each specific violent action (if any) in the program, and each dramatic character appearing in the program.

"Program" means a single fictional story presented in dramatic form. This may be a play produced for television, a feature film telecast during the period of the study, or a cartoon story (of which there may be one or more in a single program). Each of these would be analyzed separately and and recorded as a "program"; thus the basic unit is actually the play. All plays telecast in all programs during the study were analyzed in the same way, whether or not they contained violence.

Violent action means a scene of some violence confined to the same parties. If a scene is interrupted (by flashback, or shift to another scene) but continues in "real time," it is still the same act. However, if a new agent of violence enters the scene, that begins another act. These units are also called violent episodes.

Characters analyzed in all programs (whether violent or not) are of two types. Major characters are the principal roles essential to the story. Minor characters (subjected to a less detailed analysis) are all other speaking roles. The findings summarized in this report include the analysis of major characters only.

Samples of programming. Because nationally distributed programs provide the most broadly shared TV dramatic fare, network dramatic programs transmitted in evening prime time (8 p.m. to 11 p.m. each day), and network children's dramatic programs transmitted weekend mornings (Saturday and Sunday between 8 a.m. and 2 p.m.) comprise the analytical source material.*

The annual sample consists of videotaped programs broadcast in one week during the fall TV "season." When and if an episode of a regularly scheduled program is pre-empted by some special offering during the selected week, the next available episode of that series (say the following week) is videotaped. This replacement procedure is further used for those rare occasions when video-recorder failure results in the loss of a program during the scheduled sample week.

Although the sheer numbers involved make estimating the sampling error for each of the dimensions in the recording instrument prohibitive, with respect to four basic sample dimensions (network, program format, type and tone), the solid week sample is at least as generalizable to a year's programming as larger randomly drawn samples. In a sampling experiment executed in connection with the 1967-68 study, a sample of 365 programs was constructed according to the parameters of the 1967-68 project's sample,

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*In 1967 and 1968, the hours included were 7:30 to 10 p.m. Monday through Saturday, 7 to 10 p.m. Sunday, and children's programs 8 a.m. to noon Saturday. Beginning in 1969, these hours were expanded until 11 p.m. each evening and from 7 a.m. to 2:30 p.m. Saturday and Sunday. As of 1971 however, Network evening programming has been reduced by the FCC's prime time access rule. The effective evening parameters since 1971 are therefore 8 to 11 p.m. Monday through Saturday and 7:30 to 10:30 p.m. Sunday.

except that it was drawn according to a one-program-per-day random selection procedure, for a calendar year that approximately bridged the interval between the 1967 and 1968 one-week samples.* There proved to be no significant differences in the distribution of programs by network, format, type and tone (as defined for the 1967-68 project) between the experimental and solid-week samples.

Coding and training procedures. For the analysis of each program sample, a staff of between 12-18 coders is recruited. The initial period requires about three weeks of instruction and testing. Several introductory sessions are devoted to item-by-item discussion of the recording instrument. The trainee group is subsequently split into randomly assigned coding teams of two each, and all teams then view and code three selected programs. Each coding pair works independently of all other pairs, and returns one joint coding for each program. In the next general meeting, the entire staff discusses the difficulties encountered in the three-program exercise. When these problems have been resolved, the coder-pairs return to code seven additional programs selected from the tape archive for this training purpose.

The data generated by the coder-pairs on the ten training programs is keypunched and subjected to computerized agreement analysis. On the basis of these results, instructions are further discussed and perhaps revised, and idiosyncratic coder pairs are assigned to other tasks or dismissed. Coder pairs who survive this testing process proceed to analyze the season's

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*Eleey, Michael F., "Variations in Generalizability Resulting from Sampling Characteristics of Content Analysis Data: A Case Study." The Annenberg School of Communications, University of Pennsylvania, 1969.

videotaped program sample.

During both the training and data-collection phases, coders work in independent pairs and monitor their assigned videotaped programs as often as necessary, re-screening portions as needed. All programs in the sample are recorded by two separate coder-pairs to provide double-coded data for reliability comparisons. (For budgetary reasons, only 30% of the programs in the 1967-1968 analysis were coded a second time.)

A final data set for subsequent analysis is compiled from the full data base by randomly selecting one of the two codings for each program. As a last check against deviant coding, reliability measures are computed for each pair, before the final selection. This procedure would identify problem coders who may not have been screened out in the training and pretest phase. In such an instance, the data recorded by the questionable pair would be excluded from the selection, and the alternative coding used. (Over the course of this study, only one such case has been encountered.)

Assessment of reliability. The purpose of reliability measures in content analysis is to ascertain the degree to which the recorded data are consistently representative of the material being studied and do not reflect the contamination of observer bias or of instrument ambiguity. Theoretically both types of contamination can be corrected by refining the instrument and/or by intensifying coder training, or, as a last resort, by eliminating the unsalvageable variable or dismissing the incorrigible coder. Thus measures of reliability serve two functions: (1) as diagnostic tools in the confirmation of the recording instrument, and (2) as arbiters of the replicability of the procedure, assuring confidence in the final data. In this project, reliability measures serve both purposes. During the preliminary period of

instrument revision and coder training, they provide direction to the problem areas in the recording process. Final measures, computed on the study's entire corpus of double-coded data, determine the acceptability of information for analysis and provide guidelines for its interpretation.

Agreement due merely to chance gives no indication that the data truly reflect the phenomena under observation. Simple percent-agreement measures are therefore inadequate indicators of reliability, since they fail to account for the amount of agreement expected by chance. Reliability measures in the form of agreement coefficients, however, indicate the degree to which agreement among independent observers is above chance. In general, then,

$$\text{Coefficient of agreement} = 1 - \frac{\text{observed disagreement}}{\text{expected disagreement}}$$

Values for coefficients of this form will range from plus one when agreement is perfect, to zero when agreement is purely accidental (or perfectly random), to negative values when agreement is less than that expected due to chance. These coefficients will generally give more conservative estimates of reliability than will simple percent-agreement measures.

Five computational formulas are available for calculating the agreement coefficient. The variations are distinguished by different formulations of the disagreement function--depending on whether the variable is considered to constitute a nominal, ordinal, interval, bipolar or ratio scale. Except for their respective scale-appropriate sensitivity to deviations from perfect agreement, all formulas make the same basic assumptions as the

prototype for nominal scales devised by Scott.* Thus in the case of the binary variable, all five formulas yield identical results.**

The project's double-coded sample of data was analyzed for agreement via these coefficients, with the aid of a recently developed computer program.*** The cumulative reliability results for the basic items, as well as for the compound measures and indicators, are presented in Table 2 of the next major section of this report.

Cultivation analysis

It was noted before that the TV message system analysis suggests directions of inquiry for the study of conceptions that the message systems might cultivate in viewers. The study of TV's contribution to notions of social reality proceeds by various methods, each comparing responses of heavy and light viewers, with other characteristics held constant. Of the different methods used in the cultivation analysis, only two types of survey methods are included in this report; the other methods are still in the process of development and summarization. The two methods for which we have at least preliminary findings are the purposive quota and national probability sample surveys. All survey questions and other instructions were provided by the project staff. Commercial polling firms executed the surveys according to their

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*Scott, William A., "Reliability of Content Analysis: The Case of Nominal Scale Coding," Public Opinion Quarterly, 17:3:321-325, 1955.

**For a formal discussion of this family of coefficients, see Klaus Krippendorff, "Bivariate Agreement Coefficients for the Reliability of Data." in E. F. Borgatta and G. W. Bohrnstedt (eds.), Sociological Methodology: 1970, (San Francisco: Jossey-Bass, Inc., 1970).

***Krippendorff, Klaus, "A Computer Program for Agreement Analysis of Reliability Data, Version 4," Philadelphia: The Annenberg School of Communications, July 1973 (mimeo).

own standard procedures. Two different methods, samples, and survey organizations were used to take advantage of the strengths of each method and to maximize, by employing some of the same questions, the comparability of the findings.

Purposive quota sample, telephone survey. In the spring of 1973 Starch/Hooper conducted a telephone survey of a total of 607 households evenly divided among the metropolitan areas of Philadelphia, Chicago, Los Angeles, and Dallas. Households were selected at random from the area telephone directories in three steps: pages were selected by random start and fixed intervals; one column was selected at random from each page; one telephone number was selected at random from each column. If the number was not assigned to a private household, the next number in the column was used.

The quota pertained to both television viewing and sex of the respondent. Interviewers sought men in a household until the quota was filled; then they filled the quota for women. All respondents were asked the following screening question: "How many hours a day do you usually watch television? Please include morning, afternoon and evening," Respondents who answered less than two hours (light viewing) or at least four hours daily (heavy viewing) were interviewed. This yielded four categories: male heavy viewers (149), male light viewers (150), female heavy viewers (158), and female light viewers (150). Twenty percent of all interviews were telephone-validated.

National probability sample, interview survey. The second method was a personal interview survey conducted among 2,052 men and women, 18 years of age or over, living in private households in the continental United States. Interviewing for this survey was completed during the spring and summer of

1974 by members of the Opinion Research Corporation national interviewing staff. All interviews were conducted in the homes of respondents.

Advanced probability sampling techniques were used in the design and execution of the sample plan; therefore, the results may be projected to the U.S. population of men and women 18 years of age or over.

Only one interview was taken per household for this survey, regardless of the number of people 18 years of age or over in the household. Weights were introduced into the tabulations to ensure proper representation in the sample.

Television viewing and other media use were of course recorded for all respondents, and responses were again grouped into heavy and light viewing categories in a variety of demographic and other classifications.

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The balance of Part I is devoted to the description of the specific measures and a summary presentation and illustration of the cumulative findings of each of the measures of the Violence Profile.

(2) VIOLENCE PROFILE MEASURES AND FINDINGS

The two types of research comprising the Violence Profile, message system analysis and cultivation analysis, yield specific sets of measures from which indicators of trends can be constructed. In this section we describe the measures and present the highlights of findings based on the measures.

Message system analysis

The analysis of prime time and weekend daytime samples of network television drama contributes three types of information to the Violence Profile. The first is the program context of which any dramatic element, such as violence, is an integral part. The second consists of the specific indicators of violence in various program categories, and the composite Violence Index. The third type of information is in the form of risk scores and ratios which show how the pattern of violence and victimization works out for different kinds of people in the world of television drama.

Table 1 displays the kind of information that is available in the tabulations of Part II, which presents the detailed results of the message system analysis from 1967 through 1973. (It is possible of course to generate other tabulations from the cumulative archives.) Program context information is given in Tables A-1 through A-10. They contain findings on all programs in the samples, plus separate tables on cartoon and general (non-cartoon) plays. Table A-2 provides program information separately by network. Indicators of violence can be found in Tables B-1 through B-51, some giving network as well as total figures. Risk scores and ratios are given in Tables C-1 through C-54, including tabulations by age, marital status, nationality, and race, all shown for both sexes and for both cartoon and general programs. Selected findings of Part II are illustrated in the figures of Part III.

Table 2 presents the agreement coefficients for the major items, measures, and indicators of the message system analysis. These coefficients come from the assessment of the reliability of observations explained in the methodology section above. They should be taken into account when considering the measures and findings which follow.

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TABLE 1: TYPES OF INFORMATION IN THE TABULATIONS OF THE MESSAGE SYSTEM ANALYSIS*

	ALL NETWORKS			ABC			CBS			NBC		
	Tot.	Gen.	Cart.	Tot.	Gen.	Cart.	Tot.	Gen.	Cart.	Tot.	Gen.	Cart.
A. Program Context												
Format by year	1	1	1									
Program by network	2	2	2	2	2	2	2	2	2	2	2	2
Types of programs	3	3	3									
Setting of action	4	4	4									
Place of action	5	5	5									
Time of action	6	6	6									
Tone of program	7	7	7									
Theme: Attention	8	8	8									
Theme: Emphasis	9	9	9									
Theme: Story value	10	10	10									
B. Indicators of Violence												
All programs	1	4	9	31	34	36	38	41	43	45	48	50
Continued	2	5	10	[illegible]			39			46		
New programs	3	6	11	33			40			47		
TV plays		7										
Festive films		8										
Crime, Western, Adventure	12	19	24		35			42			49	
Continued	13											
New	14											
Crime	15	20	25									
Western	16	21										
Adventure	17	22	26									
Other	18	23	27									
Comic tone	28			37			44			51		
Continued	29											
New	30											

	ALL PROGRAMS			GENERAL PROGRAMS			CARTOONS		
	Tot.	M	F	Tot.	M	F	Tot.	M	F
C. Risk Ratios									
All characters	1	2	3	4	5	6	7	8	9
Age	10	11	12	13	14	15	16	17	18
Marital Status	19	20	21	22	23	24	25	26	27
SEC (Class)	28	29	30	31	32	33	34	35	36
Nationality	37	38	39	40	41	42	43	44	45
Race	46	47	48	49	50	51	52	53	54

*Each number stands for a Table in Part II of this report. For example, Program Context Tables go from A1 to A10, etc.

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TABLE 2: AGREEMENT COEFFICIENTS[1]

		1969-1973[2]		1967-1968[3]
			Emphasis, Story value[4]	
Programs:	Setting of action	.530		.693
	Place of action	.720		1.000
	Time of action	.643		.771
	Tone of action	.855		.861
		Attention		
Program Themes:	Nature, animals	.648	.745	
	Supernatural	.700	.759	
	Science	.484	.615	
	Politics	.601	.625	
	Law enforcement	.793	.845	
	Crime	.760	.813	
	Mass communications	.555	.636	
	Business	.496	.584	
	Schools	.583	.617	
	Humanities	.462	.477	
	Domestic arts	.384	.440	
	Historical events	.493	.517	
	Religion	.724	.730	
	Financial success	.554	.613	
	Close relationships	.658	.757	
	Home, family	.693	.734	
	Minorities, foreign	.611	.661	
	Generational relations	.447	.494	
	Armed forces	.729	.755	
	Physical handicap	.467	.467	
	Physical illness	.636	.691	
	Mental illness	.607	.629	
	Drugs	.717	.734	
	Alcohol	.616	.628	
	Violence	.767	.783	
Characters:	Sex	.928		.904
	Age	.664		.686
	Marital status	.708		.939
	SEC (class)	.606		.651
	Nationality	.714		.772
	Race	.848		.772
	Role (comic/serious)	.492		.861
	Violence (commits)	.670		.734
	Victimization (suffers)	.644		.792
Measures:	Prevalence of violence (%P)	.767		
	Rates of violent episodes (R/P,R/H)[5]	.853		
	Roles: involved in violence (%V)	.785		
	involved in killing (%K)	.565		
Indicators:	Program score (PS)[5]	.841		
	Character score (CS)[5]	.746		

[1]Unless otherwise noted, coefficients assume nominal data.

[2]Based on 100% double-coded data.

[3]Where reported, based on a 30% random subsample of double-coded data.

[4]Coefficients for Emphasis and Story Value assume ordinal data.

[5]Coefficient assumes interval data.

Program context

Trends in programming and in such characteristics of the plays as place, time, tone, and thematic structure provide the background against which specific manifestations of violence may be seen. The proportions of feature films, cartoons, television programs, and especially "action drama" in the overall programming (and hence the annual sample)affect the violence measures discussed in the next section.

Half or more of all annual samples consisted of plays (mostly series) produced for television. The proportion of cartoons fluctuated widely, and the percentage of feature films increased from 6.3 percent in 1967 to 13.1 percent in 1973. The three major networks shared fairly equally in overall program totals, but there were substantial annual fluctuations. For that reason certain findings will be presented separately by program types and networks.

"Action programs" are crime, western, and miscellaneous action-adventure dramas. They are almost synonymous with violent programming. Figure 1 illustrates that nearly half of general and two-thirds of cartoon programming consists of "action programs," but that this proportion is declining. However, the share of crime shows has nearly tripled, even in cartoons. The "action," as we shall see, has moved closer to home.

Figure 2 shows the place, time, and setting of action in general and cartoon programs. The physical context of non-cartoon drama has become increasingly urban, domestic, and contemporary since 1967. Cartoons have also become somewhat more domestic and present-oriented. Our previous research has found that these settings are typically less likely to feature violence than the uninhabited, foreign, or exotic settings, remote in time

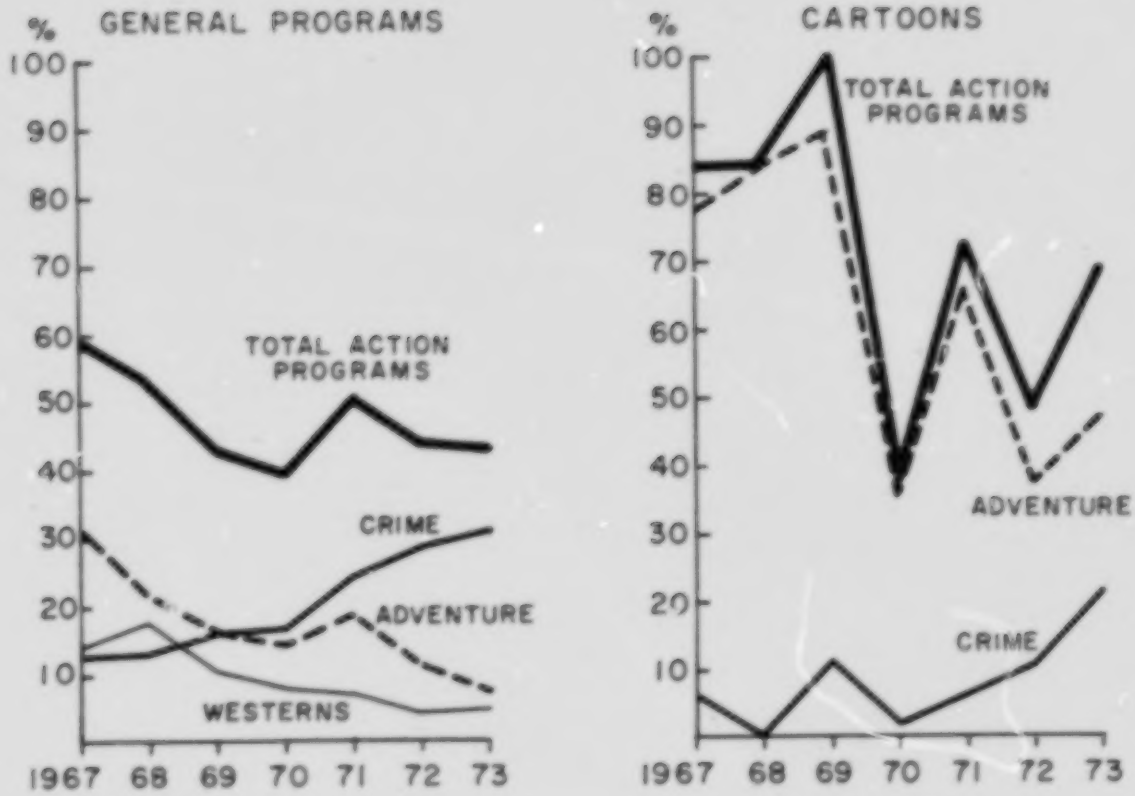

FIGURE I: TYPES OF ACTION PROGRAMS AS PERCENTAGE OF ALL GENERAL AND CARTOON PROGRAMMING

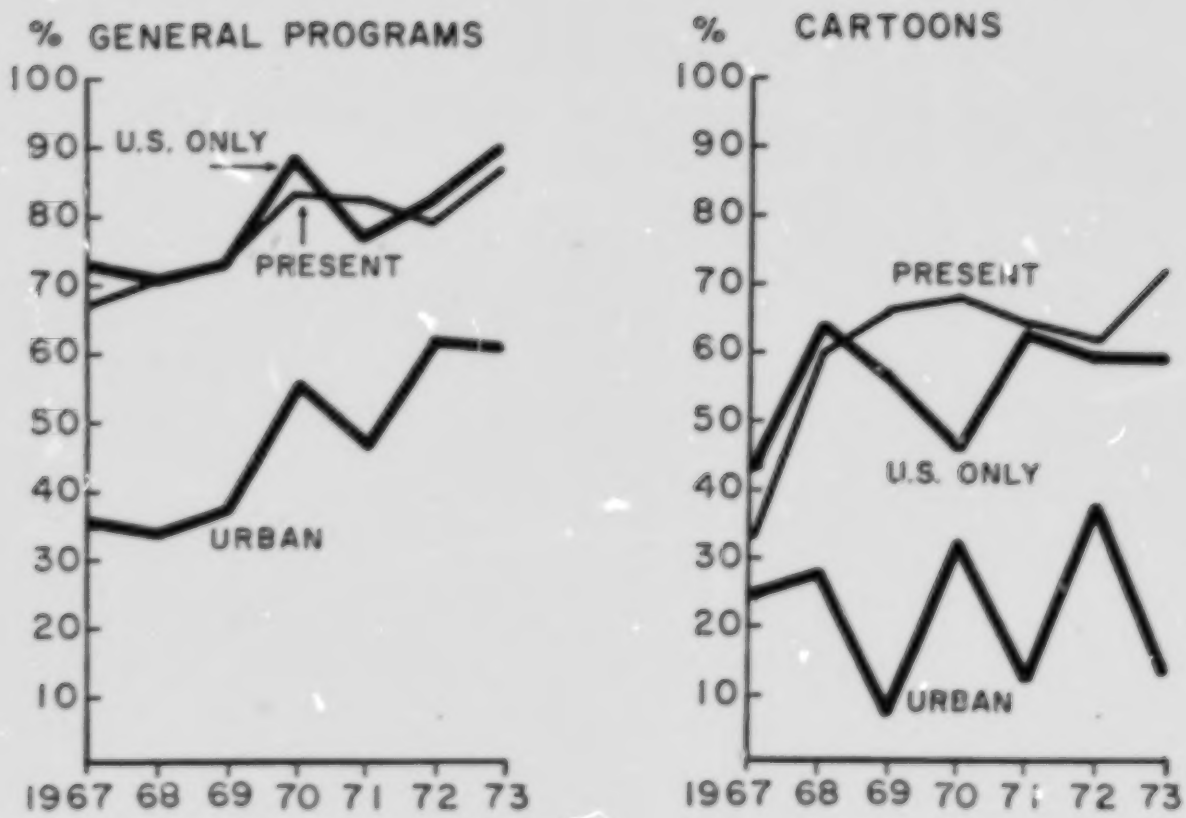

FIGURE 2: PLACE, TIME, AND SETTING

and space. Attempts to control violence while maintaining conventional story values may militate against the production of dramas in historical, futuristic, and foreign settings, and focus the symbolic functions of violence on contemporary urban law enforcement.

At the same time, the thematic structure of the world of television drama has not changed much. Rankings since 1969 of the incidence of 25 themes by relative frequency ("attention"), importance in the plays ("emphasis") and a combined measure of the two ("story value")* given on Table 3 show violence among the top three themes on all measures. Table 4 lists significant changes in rankings and shows that whatever the other measures of the incidence of violence may indicate, its relative ranking remained relatively constant; only the emphasis given to violence in cartoons declined by more than one rank, from 1 to 3.5.

The largest changes were declines in themes of animals and nature (the vanishing westerns) and in foreign settings and people, and certain increases in themes of crime, law enforcement, the supernatural, and financial success.

(We should note again that the actual findings on which these and the subsequent summary comments are based are tabulated in Part II. For example, Tables A-8, A-9, and A-10 of Part II provide complete information

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*The measure of "attention" is the percent of plays in which the theme appeared at all. "Emphasis" is the mean rating on a three-point scale (1=incidental, 2=significant, 3=the main theme of the story) of each theme. "Story value" is the arithmetic product of "attention" and "emphasis."

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TABLE 3 : THE THEMATIC ORDER: 1969-73 AVERAGES

Attention

	General		Cartoon
1	Home	1	Violence
2	Close relationship	2	Animals, nature
3	Violence	3	Science
4	Domestic arts	4	Financial success
5	Financial success	5	Mass communication
6	Business	6	Business
7	Animals, nature	7	Domestic arts
8	Crime	8	Home
9	Mass communication	9.5	Crime
10	Law enforcement	9.5	Supernatural
11	Science	11	Law enforcement
12	Foreign, minorities	12	Foreign, minorities
13	Generational rels.	13	Close relationship
14	Physical illness	14	Physical illness
15	Schools	15	Generational rels.
16	Religion	17	Historical events
17	Politics	17	Politics
18	Humanities	17	Schools
19	Armed forces	19	Armed forces
20	Supernatural	20	Humanities
21	Mental illness	21	Religion
22	Historical events	22	Mental illness
23	Physical handicap	23	Physical handicap
24	Alcohol	24.5	Alcohol
25	Drugs	24.5	Drugs

Emphasis

	General		Cartoon
1	Crime	1	Crime
2	Law enforcement	2	Violence
3	Violence	3	Supernatural
4	Supernatural	4	Law enforcement
5	Close relationship	5.5	Financial success
6	Home	5.5	Animals, nature
7	Armed forces	7	Science
8	Physical illness	8	Physical illness
9	Mental illness	9	Mass communication
10	Financial success	10	Home
11	Science	11	Business
12.5	Generational rels.	12.5	Generational rels.
12.5	Politics	12.5	Humanities
14	Foreign, minorities	14	Close relationship
15	Drugs	15	Politics
16	Business	16	Schools
17.5	Animals, nature	17	Armed forces
17.5	Physical handicap	18	Foreign, minorities
19	Mass communication	19	Historical events
20	Historical events	20	Domestic arts
21	Schools	21	Mental illness
22	Religion	23.5	Alcohol
23	Humanities	23.5	Drugs
24	Domestic arts	23.5	Physical handicap
25	Alcohol	23.5	Religion

Story Value

	General		Cartoon
1	Home	1	Violence
2	Close relationship	2	Animals, nature
3	Violence	3	Science
4	Crime	4	Financial success
5	Law enforcement	5	Crime
6	Financial success	6	Supernatural
7	Business	7	Mass communication
8	Domestic arts	8	Law enforcement
9	Science	9	Business
10	Animals, nature	10	Home
11	Mass communication	11	Domestic arts
12	Physical illness	12	Close relationship
13	Foreign, minorities	13	Foreign, minorities
14	Generational rels.	14	Physical illness
15	Schools	15	Generational rels.
16	Politics	16	Politics
17	Supernatural	17	Schools
18	Armed forces	18	Historical events
19	Religion	19	Armed forces
20	Humanities	20	Humanities
21	Mental illness	21.5	Mental illness
22	Historical events	21.5	Religion
23	Physical handicap	23	Physical handicap
24	Drugs	24.5	Alcohol
25	Alcohol	24.5	Drugs

TABLE 4 : CHANGES IN THE THEMATIC ORDER

	Attention Rank		Emphasis Rank		Story Value Rank	
	1969	1973	1969	1973	1969	1973
Animals, nature						
General	2	- 10.5	17	- 21	7	- 12
Cartoons	1	- 2	5	- 11	2	- 2
Supernatural						
General	20	- 19	4	- 4	16	- 16
Cartoons	11	- 5	4	- 1	8	- 4
Law Enforcement						
General	10.5	- 9	5	- 2	6.5	- 6
Cartoons	7	- 9	6	- 2	6	- 7
Crime						
General	10.5	- 10.5	3	- 1	5	- 5
Cartoons	7	- 5.5	3	- 3.5	5	- 6
Financial Success						
General	9	- 3	7	- 12	6.5	- 3
Cartoons	4.5	- 4	2	- 6	4	- 5
Foreign, minorities						
General	7.5	- 15	16	- 11	11	- 14.5
Cartoons	4.5	- 11	11	- 20.5	9.5	- 13
Violence						
General	4.5	- 5	6	- 6.5	3	- 4
Cartoons	2	- 1	1	- 3.5	1	- 1

about the measures on which the rankings of thematic attention, emphasis, and story value are based.)

Indicators of violence

Next we turn to more specific measures and indicators of violence itself. Before we present the findings of trends based on these measures, however, it will be necessary to describe the components and the composition of the Violence Index.

Three sets of measures have been computed from the direct observational data of the message system analysis. These measures may be interpreted on their own. They have also been combined into two scores and a single composite Violence Index.

The three sets of measures show the extent to which violence prevailed at all in the program samples, the frequency and rate of violent episodes, and the number of roles calling for characterizations as violents, victims, or both. These sets of measures are called prevalence, rate, and role, respectively. The following description of each, and of the indicators they yield, can be followed graphically on Figure 3 (in the next section and in Part III), and numerically in the B-series of tables of Part II.

Prevalence. Is there any violence in a program, and what proportion of plays in a particular sample contain violence? In other words, what percentage of plays contain any "overt expression of physical force against self or other, compelling action against one's will on pain of being hurt or killed, or actually hurting or killing?" The proportion of such plays is presented graphically (e.g. Figure 3) and in the tabulation of findings

(B-series in Part II) as the percent of programs containing violence (%P), and (on the tables only) also as the percent of program hours containing violence.

Rate. As measures of prevalence indicate the proportion of program units in which one or more acts of violence occur, so rate expresses the frequency of these acts in units of programming and in units of time. The acts themselves are labeled "violent episodes," and defined as scenes of some violence confined to the same agents. The number of such episodes divided by the total number of plays (violent or not) in a sample yields the rate per program (R/P). The rate per hour (R/H) is the number of episodes divided by the total number of program hours in the sample. This latter rate measures the concentration or saturation of violence in time, and compensates for the difference in rates between a long program unit (such as a feature film) and a short one (such as a 15-minute cartoon).

Roles. The characterizations of roles as violents (committing violence) or victims (subjected to violence), or both, yields several measures. They are: percent of violents out of all characters in a sample; percent of victims out of all characters in a sample; all those involved as violents or as victims or both (%V); percent of killers (those committing fatal violence); percent killed (victims of lethal violence); and all those involved in killing either as killers or as killed (%K).

Composite scores and index

The above measures of violence are based directly on analysts' observations. They are provided in all tabulations and should be used as the basic indicators of trends. However, for ease of illustration

and comparisons, they are combined to form summary scores and an index. However, these are not statistical findings in themselves, and should not be treated as such. Rather they serve as convenient illustrators of the basic findings and facilitate gross comparisons.

The two scores are based on selected measures showing qualities of programs and of characterizations, respectively. Prevalence (%P), rate per program (R/P), and rate per hour (R/H) are reflected in the program score (PS). This is computed as follows:

$$PS=(\%P)+2(R/P)+2(R/H)$$

In this formula, %P is the percent of programs containing violence, R/P is the rate of violent episodes per play, and R/H is the rate per hour. The rates R/P and R/H are doubled in order to raise their relatively low numerical value to the importance that the concepts of the frequency and saturation of violence deserve. Nevertheless, the program score gives the greatest weight to the extent to which violence prevails at all in the programs. Secondary weight is given to the frequency of violence and the saturation of the programs with violent action.

Roles involving characters in any violence, weighted by roles involved in killing, are expressed in the character score (CS). The formula

$$CS=(\%V)+(\%K)$$

represents the percent of all leading characters committing violence, suffering violence, or both (%V), with added weight given to the percent of those involved in killing either as killers or as victims, or both (%K).

Finally, the Violence Index is obtained by adding the program score to the character score. Prevalence, rate, and role are thus reflected in the Index, with program information usually weighing slightly more heavily in the balance than information derived from character analysis. Of course,

all these indices are additive: if all components change in the same direction, the Index accumulates the changes; if they go counter to one another, the Index balances them out.

Trends: What the Index shows

Now we are ready to summarize the trends indicated by the measures just discussed, and tabulated in detail in the B-series of tables in Part II. Although we shall refer to the Violence Index, changes attributable to one or another of its components will also be noted.

Trends in the prevalence, rate, and role of violence reflect programming policy. Broadcast codes and their enforcement, and the operation of "standards and practices" or other broadcast censorship follow sensitive areas of programming with care and apply such controls as seem to be in the long-range interest of the industry. Programming (especially network) policy also determines the mix of different kinds of programs according to a formula that combines costs and ratings with judgments of both commercial and political expediency. Our earlier examination of program context found that while "action programs" were reduced as a proportion of all programming, the share of crime programs (and cartoons) rose, and the "world" of television drama was becoming more domestic, present-time, and urban oriented. Perhaps partly as a result of policies attempting to control the frequency of violence, the settings in which violence occurred most often -- exotic, historical, distant -- became less frequent; the tighter scope of violent action came to focus more on the here and now.

At the same time, the thematic order remained remarkably stable except for some declines in themes associated with outdoor and distant action, and increases in themes of crime, law enforcement, business, and the supernatural. The ultimate consequences of these aspects of the dramatic context are in

the symbolic functions and social relationships that violence represents. We shall examine these functions and relationships after a closer look at the indicators.

If we look at the composite trends for all programs on Figure 3, we see that violence has not only come closer to home but has also declined in certain respects. Where do the changes come from?

The only substantial decline has been in the proportion of violent characterizations, especially of those committing violence. They decreased from over half of all leading characters to a little more than one-third. Victims, however, decreased less -- only from two-thirds to about half of all leading characters -- thus raising the relative ratio of victimization, as we shall see in the next section.

Nevertheless, the proportion of all those involved in any violence (%V) decreased from 73 percent in 1967 to 56 percent in 1973, and the proportion of those involved in any killing fell from 19 percent to 7.5 percent. The prevalence of violence (%P) declined only from 8 out of every 10 programs to 7 out of 10. The rates of violent episodes (R/P and R/H) changed little in seven years. Thus, as we could foresee from the thematic analysis of program context, violence remained a (or perhaps the) staple element of dramatic programming, but the visibility of violent characters, especially of killers (but not so much of victims), was sharply curtailed.

Different types of programs naturally made different contributions to these overall findings. (To follow these in detail, the reader is again referred to Parts II and III.) Figure 4 shows a comparison of violence indices of various program types. The most notable and steady declines in certain aspects of violence have been in the types of programming most amenable to network controls: plays produced for television, and cartoons.

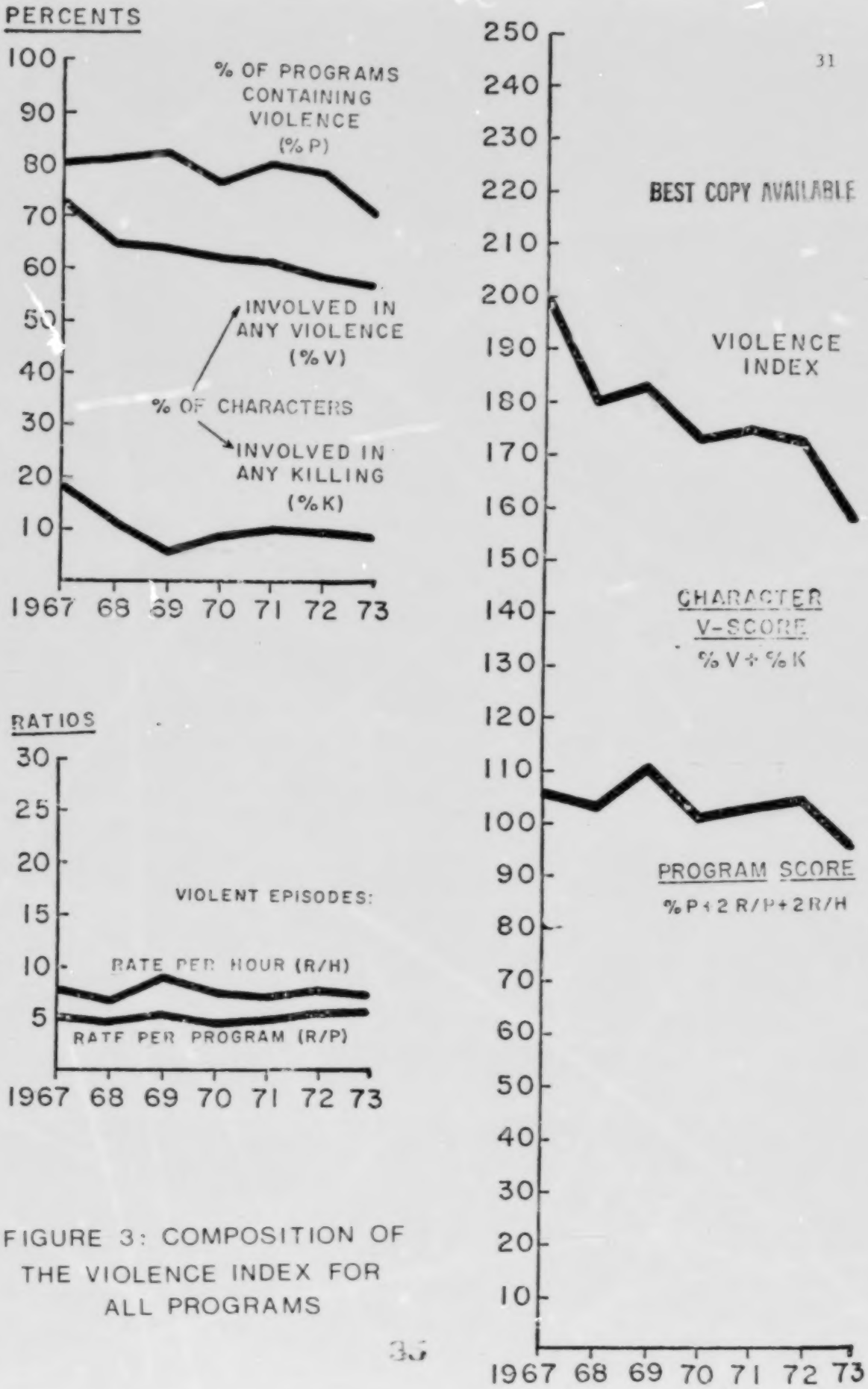

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FIGURE 3: COMPOSITION OF THE VIOLENCE INDEX FOR ALL PROGRAMS

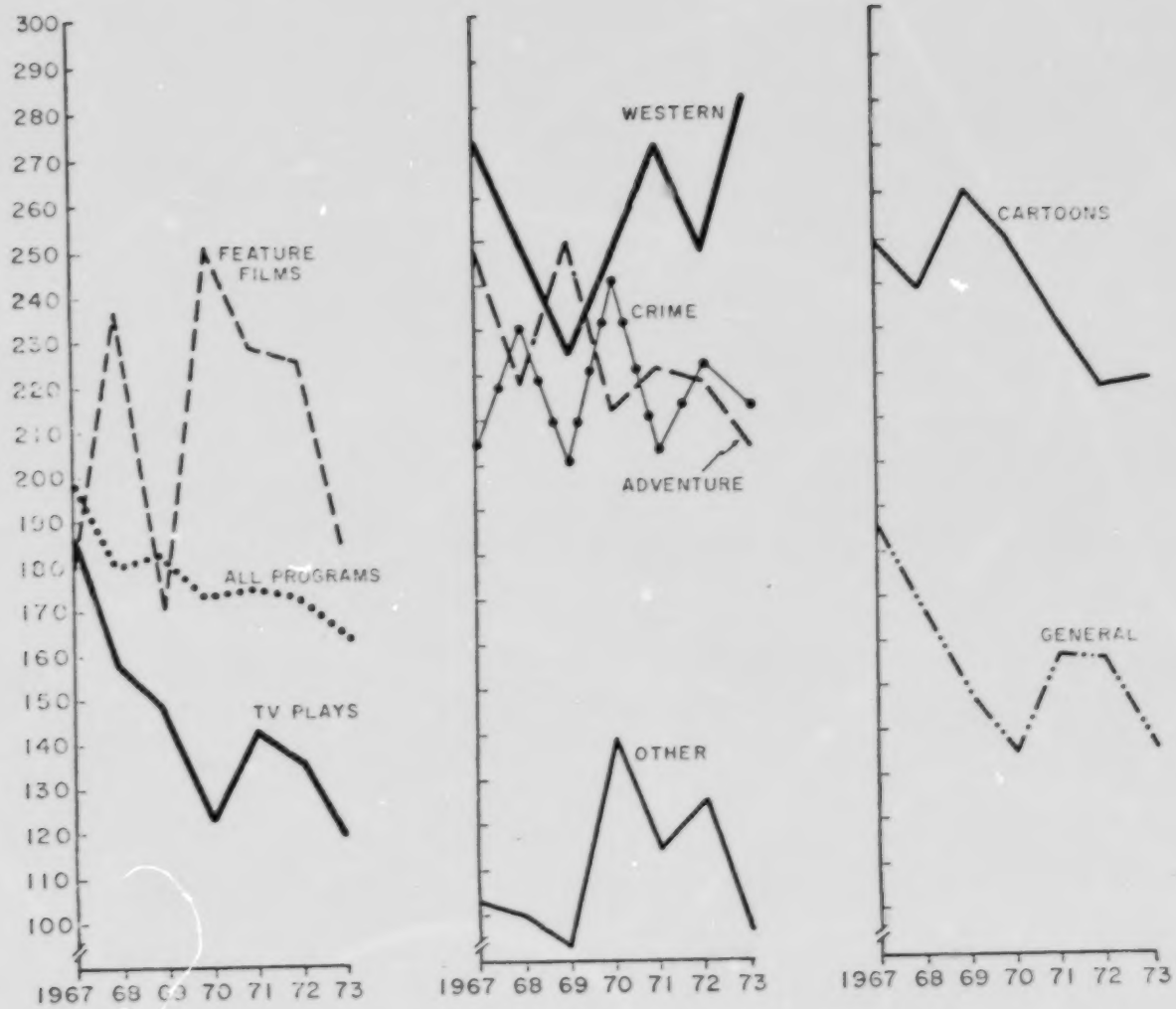

FIGURE 4: PROGRAM FORMAT AND TYPE INDICES COMPARED

The few Westerns (3 in 1973) were more violent than ever, and the growing crime segment was as violent as ever. In fact, the prevalence, rate, and saturation of violence in crime programs were up, raising the crime program score from 108 in 1967 to 129 in 1973. The proportion of violents (but not of victims) in crime plays fell substantially, although the share of killers remained steady and of those killed rose sharply (see Table B-7 for all crime and B-12 for non-cartoon crime programs, in Part II). Crime programming may be increasingly responsible for the strong flavor of successful law-enforcement in much television violence.

Cartoon programming, more violent than crime, increased in the rate of violence per program, and maintained its prevalence at the second highest level in seven years, but reduced the visibility of violent characters and virtually eliminated killing. (See Table B-5 in Part II.)

Figure 5 shows that trends in violence are similar for continuing programs and for new programs in each fall season. A sharp increase in feature film violence in 1971 and an even more pronounced decrease in new cartoon violence in 1972 were the exceptions.

Figures 6 and 7 compare violence indices for the networks. It is clear that CBS lost its traditional place as the "least violent" and NBC as the "most violent" network; the two joined in a low middle position between their former "ratings." However, ABC, formerly highest with NBC, rapidly controlled its violent programming and gained, with the exception of 1972, the "least violent" position among the networks. The general decline in violent characterizations can thus be attributed mainly to the policies of ABC and to a lesser extent of NBC.

Network comparisons also find "general" (non-cartoon) programs to be

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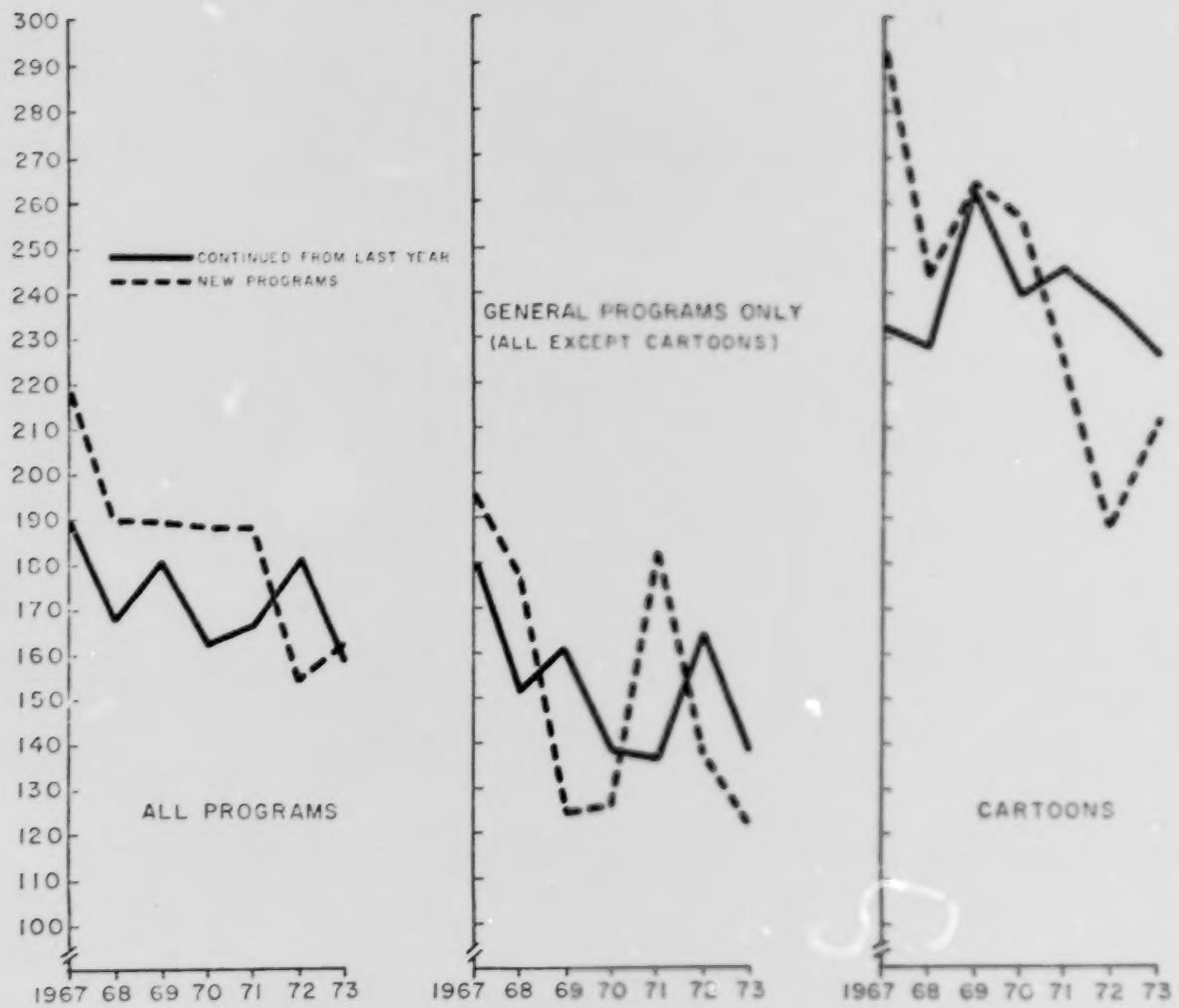

FIGURE 5: NEW AND CONTINUED PROGRAM INDICES

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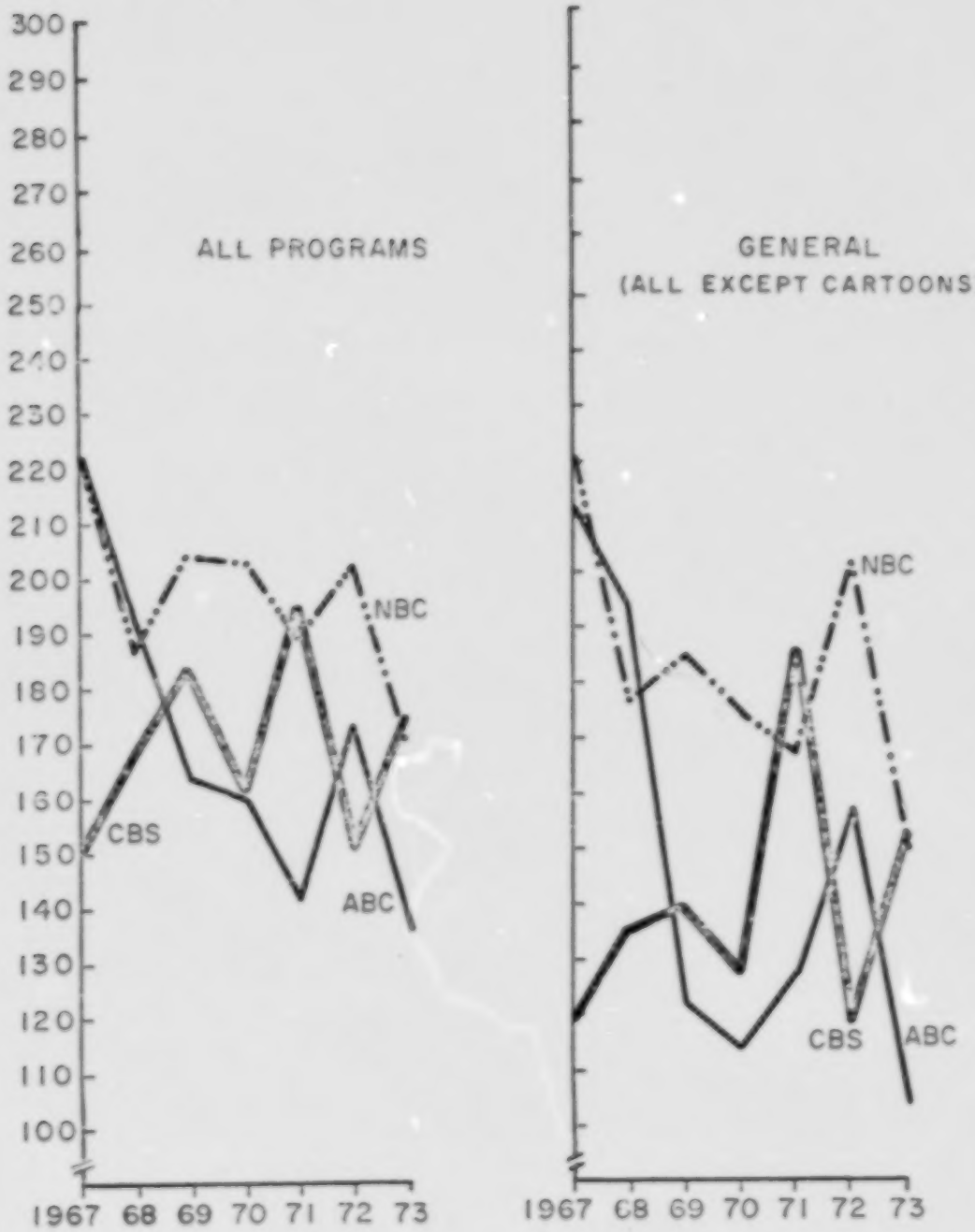

FIGURE 6: NETWORK INDICES

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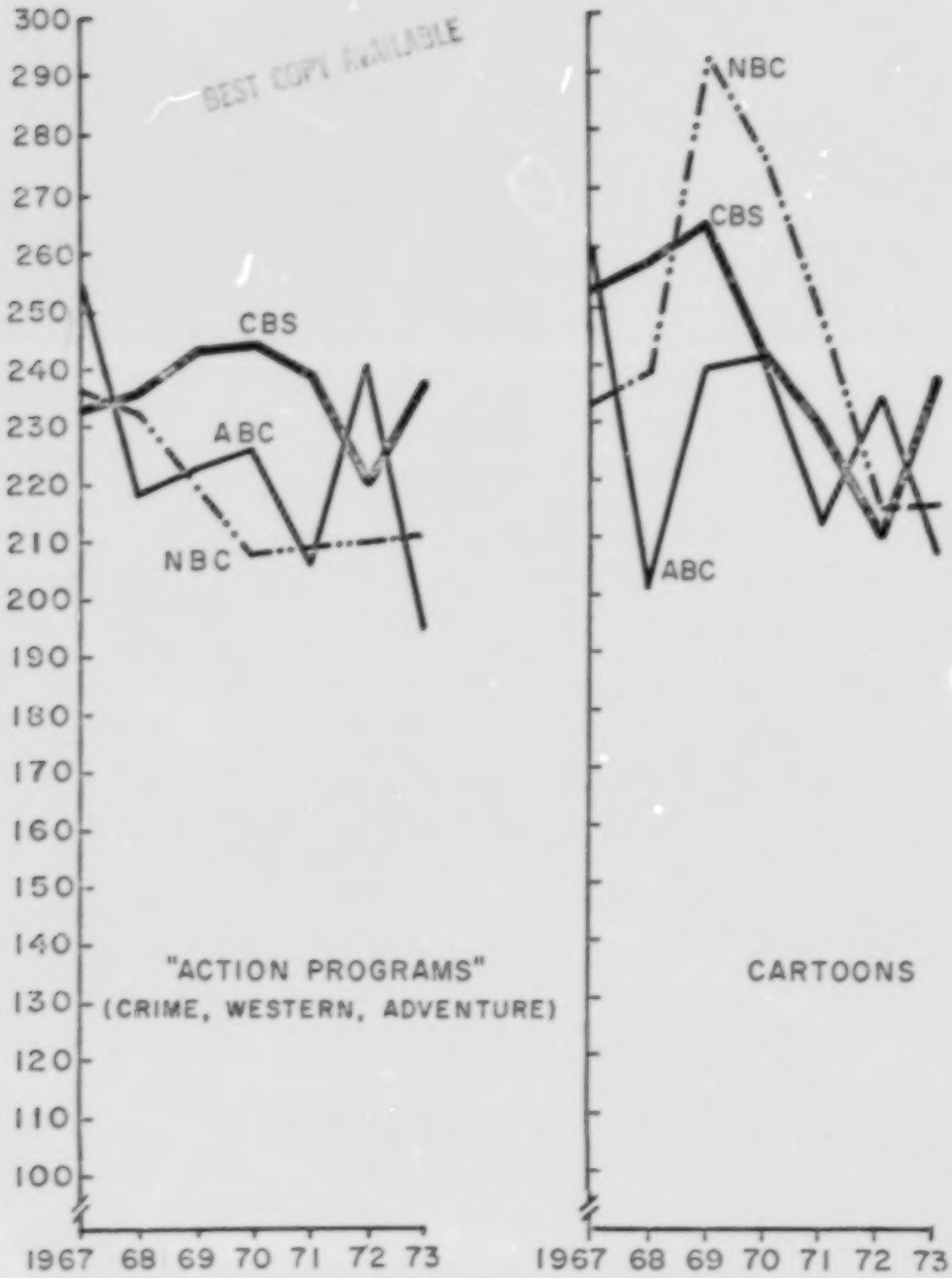

FIGURE 7: NETWORK INDICES: ACTION AND CARTOON PROGRAMS

the chief source of ABC's "least violent" showing (Figure 6). "Action program" (crime, western, adventure) and cartoon indices (Figure 7) show CBS the "most violent" of the networks in 1973.

Network decisions on program mix and standards are reflected in the specific indicators and summary index of violence. In and of themselves such "ratings" are of no scientific or social significance. They do not illuminate causes of consequences. They are useful, however, as concrete manifestations of policies and as checks on declarations of intent.

Bringing violence "closer to home," and reducing the frequency of some types of violent characterizations (but not necessarily of others) have symbolic and social consequences not apparent in these gross figures. We shall now turn to a review of findings more relevant to those consequences.

Symbolic functions: patterns of risk

Any show of force demonstrates a structure of power. Any violence exhibits a set of social relationships. These manifestations shape the symbolic functions and guide the human consequences of violent representations.

The most elementary -- and most telling -- relationship involved in violent action is that of violent and victim. Symbolic functions and social consequences are implicit in the human types differentially associated with inflicting and suffering violence. The pattern of winners and losers provides a differential calculus of hazards and opportunities for different groups of people in the "world" of television drama. That pattern may cultivate a corresponding sense of risk and margin of fear among those who live much of their lives in that "world," and who may project its symbolic structure into their conception of social reality.

These considerations guided the construction of risk ratios from the character data on violence roles, and led to one line of investigation in the cultivation analysis, which will be discussed later. Here we shall examine the patterns of violence and victimization: who tend to commit and to suffer how much violence? Which groups do the shifting ratios of victimization favor over which other groups in the symbolic "world?"

The basic data for the examination of these tendencies are tabulated in the C-series of tables in Part II. A few illustrations are also provided in Figures 16 to 18 of Part III.

First, in every year since 1967, and in almost every category of dramatic characters, victims outnumber violents. However, also in nearly every group, there are more killers than killed. The symbolic functions of getting hurt are obviously different from those of getting killed. Fear of victimization pervades the world of television drama, and may cultivate a corresponding sense of danger in the world of social reality. However, perpetrators of television violence often serve only to provoke the hero to righteous indignation. The final blow must favor those who survive to serve the cause of justice, power, and happy endings.

The sense of victimization did not decline as the proportion of violent characters, and especially of perpetrators, decreased. On the contrary, the social patterns seem to sharpen with every reduction in violents. The proportion of victims was the highest of all seven years in 1973: there were 1.4 victims for every violent, meaning that for every 10 characters who hurt or killed another, 14 were hurt or killed. The ratio in cartoons was 1.7, also the highest; for every 10 violent cartoon characters, there were 17 victims.

Secondly, although women were less likely to get involved in violence than men, for five of the seven years studied they were more likely to be victimized, and always more likely to be killed.

Table 5 presents a summary of the sex and group scores of involvement and risk ratios for all years studied. The character score is the role component (CS) of the Violence Index; it is the percent of all characters involved in any violence and the percent involved in any killing. The violent-victim and killer-killed ratios are obtained by dividing violents and victims, or killers and killed. The plus sign means more violents or killers in the group; the minus sign means more victims or killed.

We see that the 1967-73 totals show 1.2 male and 1.3 female victims for every violent male and female. Even more striking are the differential risks

TABLE 5: INVOLVEMENT IN VIOLENCE AND ITS RISKS FOR DIFFERENT GROUPS

GROUPS	MALE CHARACTERS			FEMALE CHARACTERS		
	Character score	Violent-victim ratio	Killer-killed ratio	Character score	Violent-victim ratio	Killer-killed ratio
All Characters, 1967-73	80	-1.2	+2.1	48	-1.3	-1.5
Age: children, adolescents	69	-1.7	+*	48	-1.3	*
young adults	82	-1.2	+4.0	59	-1.7	-1.4
settled adults	79	-1.1	+2.1	34	+1.03	-1.5
old	57	+1.1	-1.3	50	-2.3	-*
Marital status: not married	84	-1.1	+2.2	59	-1.5	-2.5
married	63	-1.3	+2.1	36	-1.1	+2.0
Class: clearly upper	83	-1.2	+1.1	51	-1.7	-1.5
middle or indeterminate	78	-1.2	+2.6	47	-1.3	-1.3
clearly lower	105	-1.03	1.0	86	-5.0	-*
Nationality: U.S.	73	-1.2	+2.9	44	-1.4	-1.7
other	98	-1.2	+1.1	62	-1.7	+2.0
Race: white	77	-1.2	+2.4	47	-1.3	-1.4
other	88	-1.3	+1.3	57	-2.3	-*

*Group has neither violents nor victims. If * is preceded by a sign, group has either no violents or no victims; +* means only violent(s) but no victim(s); -* means only victim(s) but no violent(s).

Note: Character score is the percent of characters involved in any violence plus the percent involved in any killing. V-V ratio is of violents (+) and victims (-). K-k ratio is of killers (+) and killed (-).

of fatal victimization. There were more than two male killers for every male killed; but for every four women killers, six women were killed.

The pattern of risks for different age groups shows that violence is most likely in young adulthood. More than eight out of ten young men and nearly six out of 10 young women are involved in some violence. When so involved, young adult women are more likely to be victimized than young adult men. The young men are the most likely of all groups to get away with fatal violence: for every one killed there are four killers among them. This is clearly the group that tends to strike the final blow.

Unmarried males generally fare better than married, but unmarried women fare much worse than anybody. Single women are the most likely of all groups to be killed; they have five killed for every two killers. For both married women and for all males the odds are reversed. In the world of television drama, men lose and women gain power in marriage, narrowing but not closing the gap of sex role inequality.

The most likely to get involved in violence are the lower class characters of both sexes. Lower class women are also the most victimized: they suffer five victims for every one of their group able to inflict violence. Nationality patterns tend to favor Americans over others, except that foreign women are more lethal than foreign (but not American) men. The racial pattern shows whites to have the upper hand in every category of both sexes.

Most likely to get involved in violence, then, are lower class, foreign, and nonwhite men, in that order. Old men have the most favorable, and male children the most unfavorable odds of general male victimization. Young adult males have the best and old men the worst male killer-killed ratios.

Among women, most likely to get involved in violence are lower class, foreign, single and young adult, and nonwhite. Women are the most victimization-prone, especially lower class, nonwhite, and old women. Only married and foreign women, but most groups of men, have the power to strike more lethal blows than they suffer. Single women suffer fatal violence by far the largest ratios of all groups.

The pattern of victimization implicit in television drama thus demonstrates an invidious sense of risk and power. Symbolic violence potentially trains victims as well as perpetrators. Furthermore, indicators of these symbolic functions are not as easily altered or manipulated as are those of sheer frequencies. Simple selective reductions in violent characterizations may sharpen rather than blunt the discriminatory edge of social relations inherent in the portrayals. Risk ratios are a first step toward indicators that can illuminate the human quality and social equity as well as the quantity of various aspects of violent portrayals.

Cultivation analysis

The fourth and final set of indicators in the Violence Profile comes from the cultivation analysis. They are called cultivation differentials and cultivation scores, and highlight some conceptions of social reality that tend to be cultivated by television viewing in different groups and in comparison to other cultural or media activities. The findings reported here are partial and preliminary. Nevertheless, they give consistent evidence of the similarity of viewers' beliefs to some "facts" found in the world of television and of the relationships of such beliefs to the amount of viewing, to the specific symbolic functions of violence, to the sex, education, and age of the viewer, and to other media use.

The first round of cultivation studies dealt with the issue implicit in the findings on television violence. As noted in the section on methodology above, two approaches were initiated; both are still in the process of development. One uses semi-projective picture tests with children and adults. The other approach, whose preliminary results are reported here, uses large scale surveys to elicit adult responses. Both approaches ask respondents to choose between alternatives representing either the television version or some other version of "facts" or views. To the extent that the pattern of television violence and victimization cultivates conceptions of social reality, heavy viewers should be more likely than light viewers to exaggerate danger and violence and law enforcement activities in the real world, and generally project assumptions that would underly a heightened sense of fear and risk. Furthermore, these viewing-related overestimations might also reflect the different patterns of victimization and such other assumptions as viewers of different sexes, ages, and educational levels might apply to their own situations.

Purposive quota sample

A question from the purposive quota sample survey that bears on the potential lessons of television violence is this: "During any given week, what are your chances of being involved in some type of violence?" The respondent could overestimate the chances by answering "about 50-50," which is closer to the answer found in the world of television, or give the other answer, which was "one in a hundred." The cultivation differential is the percentage difference between heavy viewers (4 or more hours a day) and light viewers (less than 2 hours a day) giving the "television answer." A positive CD score would show that to that extent -- and all other factors being equal -- viewing does tend to cultivate TV's version of the world in the

minds of viewers with respect to a particular question; a zero or negative CD score would suggest that it does not. The actual finding, shown on Figure 8, is +13 for all respondents, meaning that 13 percent more heavy than light viewers selected the television answer, which is a significant cultivation differential in the expected direction. In other words, substantially more heavy than light viewers of television overestimate the danger of violence to themselves in everyday life.

Figure 8 shows that all cultivation differentials are positive. A college education counteracts the cultivating effects of television especially

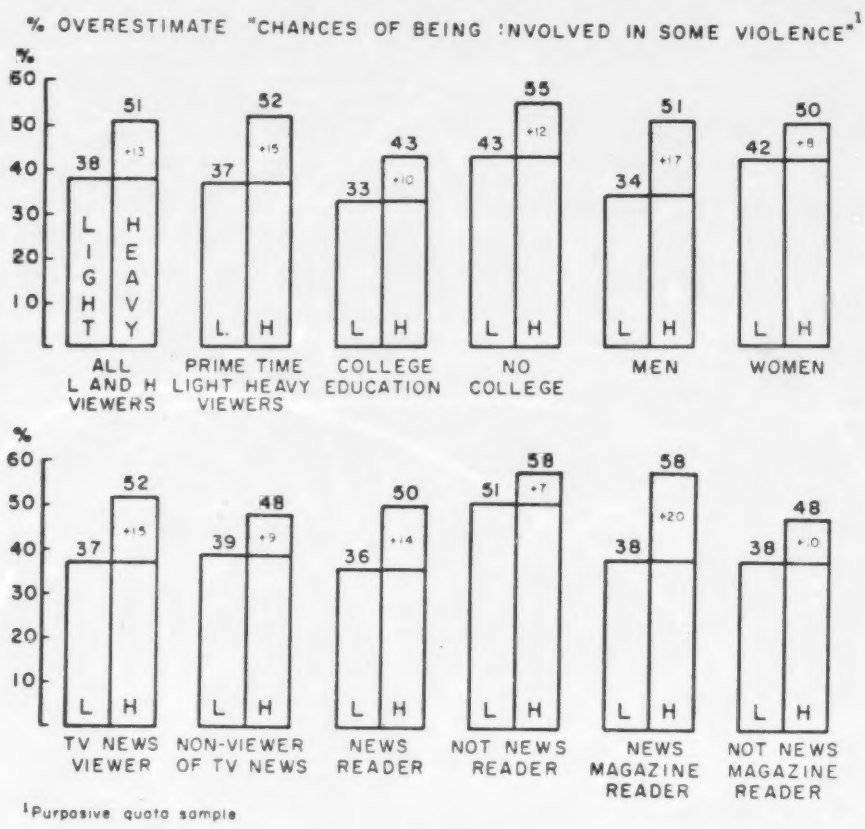

FIGURE 8

PERCENTS OF LIGHT AND HEAVY VIEWERS GIVING "TV CHOICE" ANSWERS; CULTIVATION DIFFERENTIALS (SHADED AREA)

for light viewers. Television overcomes the effects of college for heavy viewers; they choose the "television answer" in the same proportion as do the light viewers without a college education. The heavy-viewing no-college group is of course the most likely to choose the "television answers."

The effects of newspaper reading are similar to those of education, with which they are undoubtedly related. TV news and news magazines, however, do not seem to make a difference. The results on sex differences show that only male light viewers escape the heightened sense of danger. Additional information comes from the more detailed analysis of the national probability sample responses.

National probability sample

On the national probability sample interview survey we used the following four questions:

1. During any given week, about how many people out of 100 are involved in some kind of violence? Would you say about one person in 100 or about 10 people in 100? (This is of course quite similar to the previous question; "10 people in 100" was considered the television answer.)
2. What percent of all crimes are violent crimes -- like murder, rape, robbery and aggravated assault? Would you say it is 15 or 25 percent. (Here "25 percent" was considered the television answer.)
3. About what percent of all males who have jobs work in law enforcement and crime detection -- like policemen, sheriffs, detectives, etc. Would you say it is 1 or 5 percent? (Here "5 percent" was the television answer.)

4. About what percent of Americans who have jobs are professionals or managers -- like doctors, lawyers, teachers, proprietors, or other executives? Would you say it is 20 or 25 percent? (The television answer was 25 percent.)

The "television answer" to these questions again overestimates the actual proportions, as does television. Of course, the purpose was not to test for the knowledge of "real answers" but to assess the extent to which television viewing would make viewers err in the direction of the "facts" as seen in the world of television. Therefore, the "other answers" were also "error choices" but farther away from television.

The results of the survey conform, on the whole, to the same pattern -- that of independent and apparently cumulative effects that can be associated with demographic characteristics and media habits. The number of respondents (unweighted and weighted) is reported on Table D-1 of Part II; the results of the survey for the four questions are tabulated in Tables D-2 through D-5.* They reflect weighted responses classified into three viewing groups: light (less than 1½ hours per day), medium (between 1½ and 3 hours), and heavy (more than 3 hours per day).** The cultivation differential was

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*Respondents answering "don't know" (or "no answer") on any question were eliminated from the tabulations for that question.

**The question used on the national probability sample (ORC) Survey to determine levels of television viewing asked respondents, "How much time did you spend yesterday watching televison?" Analysis of the responses to this question for various demographic groups revealed no significant relationships between the "none" category and those variables usually associated with differences in levels of television viewing (by contrast, this was not the case for those respondents who answered "none" to a similar question about newspaper reading). Because of the "yesterday" focus of the question we concluded that it would not be appropriate to designate these respondents as chronic light or non-viewers of television and chose to limit our comparisons to those respondents who reported watching at least some television on the previous day. The reported classification of the sample into three levels of viewing reflects a trichotomization of the sample with the "nones" deleted.

always computed as the difference between light and heavy viewers.

These results confirm and extend the findings obtained from the quota sample. The college group is usually less likely to give the "television answer" than the no-college group,* but heavy viewing tends to neutralize the effects of education and result in large cultivation differentials, especially among women. Women consistently report higher estimates of violence and law enforcement than men, or higher cultivation differentials, or both. Age emerges as an important factor, with those under 30 generally conforming more to the TV view of violence than those 30 and over.

In order to permit a more comprehensive and broadly-based assessment of the separate and interactive effects of demographic and media variables, we have combined the responses to our four questions from the national probability sample into a single indicator which we call the cultivation score.

Cultivation score

This score is produced by giving each response a value of 3 for the "television answer," 2 for a "don't know" or no answer and 1 for a "non-television answer." Respondents who gave more than two "don't know" answers were deleted. The scores were summed and could range from 4 to 12 for each respondent.** Respondents with a total score of 8 or more were considered the "high scorers." Splitting the sample at this point resulted in 40 percent low scorers and 60 percent high scorers. The tabulations show the percentage of high scorers in the light, medium, and heavy viewing groups by sex, age, education, and by newspaper reading. They are reported in Tables D-6 and D-7 in Part II.

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*Responses to the question on the percent of violent crimes (D-3) present a different pattern which is being further analyzed.

**Crosstabulations of each question by each other question revealed significant inter-question correlations (gamma and Kendall's tau) in all cases.

These findings further support and extend the patterns of cultivation discussed above. As Figure 9 demonstrates, the three-way viewing comparison permits the observation of a positive and generally linear relationship between the amount of television viewing and cultivation effects. The cultivation differentials can also be seen in Figure 9.

Women who are light viewers again exhibited greater assumptions of risk than male light viewers, as measured by high cultivation scores. Their

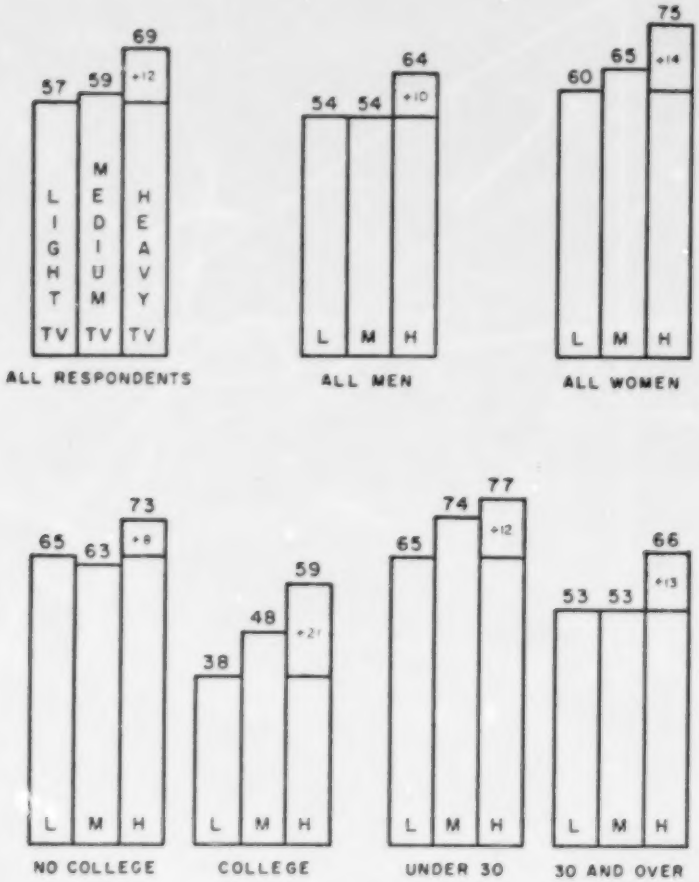

FIGURE 9

PERCENT OF HIGH CULTIVATION SCORES AND DIFFERENTIALS BY SEX, EDUCATION, AND AGE

apprehensions also rose more than the men's as the result of heavy TV viewing. Women thus show a greater tendency to be affected by the pattern of victimization both in the world of television and in their own conceptions of real life.

The overall education difference confirms and refines the pattern discussed before. The college educated light viewer is the least likely to give the "television answer" to our questions. But television has its greatest relative cultivating effects on college educated heavy viewers: they differ from college light viewers by 21 percentage points. In contrast, the difference between college educated and not college educated heavy viewers is only 14 percentage points.

Age emerges as a consistent influence. Respondents under 30 showed greater readiness to choose the "television answers" at all levels of TV viewing than older respondents. Younger light viewers responded like older heavy viewers, with younger medium and heavy viewers scoring even higher. It seems evident to us that those under 30 have grown up in a world in which television was an increasingly pervasive aspect of the cultural environment. In comparison with the older segment of the sample, those under 30 can in fact be considered to be members of the "television generation."

An examination of the combined influences of age, sex, and education on television's cultivating effects provides a closer look at these findings.

Age and education. Growing up with television makes the presence or absence of alternative cultural influences especially important. In the absence of alternatives such as a college education might provide, television has little or no competition in the formation of concepts and assumptions about the world. It seems to make little difference whether a member of the "television generation" who has had no college experience is a light or heavy viewer.*

*It should be noted that the proportion of college educated respondents is higher in the under-30 than in the 30-and-over group.

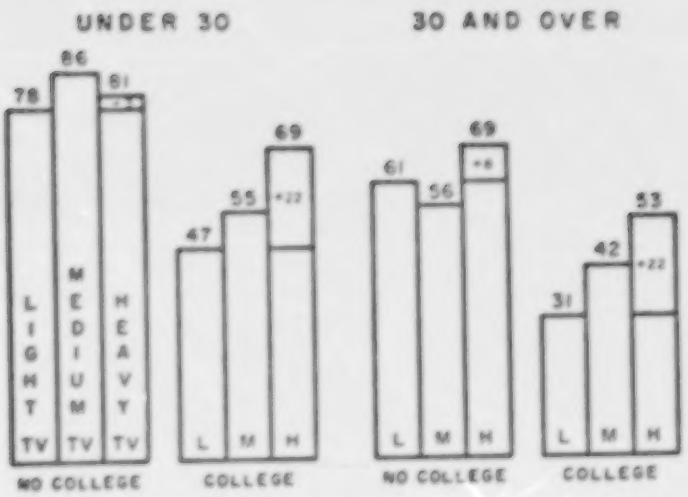

FIGURE 10

PERCENT OF HIGH CULTIVATION SCORES AND DIFFERENTIALS BY EDUCATION IN TWO AGE GROUPS

It can be seen on Figure 10 that about four out of five light or heavy viewers of the "under 30" generation who had not gone to college scored high in the television cultivation test. Such high scoring may be so close to the "ceiling" of the test that cultivation differentials cannot be obtained or expected.

The dominance of television's cultivating effects since early childhood also blunts the countervailing influence of a college education. But college makes a striking difference in responses, provided that the respondent is a light viewer of television. There is a 30 percentage point "college gain" (i.e. reduction in high cultivation scores) between the light viewing "college" and "no-college" respondents of both age groups (even though the "under 30" group generally scores higher).

This "college gain" for light viewers, however, was nearly overcome by a cultivation differential of 22 percentage points between the light and

heavy viewers of the college respondents in both age groups. Heavy viewing of television cuts the "college gain" in half or less, especially for the younger group. In that group college reduced the light viewers' score by 31 percentage points; it reduced the heavy viewers' score by only 12 percentage points. Comparable figures for the "30 and over" light viewers and heavy viewers, respectively, are 30 and 16 percentage points.

Patterns associated with age and education thus seem to interact (1) to boost TV's cultivating effects in the younger and less educated group, (2) to cancel out the effects of differences in the amount of viewing in that group, (3) to make college education an important alternative influence on cultivation levels in both groups; (4) but to make the "TV generation's" heavy viewers gain much less of a sense of alternative conceptions from college than either the light viewers of both age groups or the heavy viewers of the older group.

If one were to try to pit the influence of college and age against that of television, one would conclude that TV's cultivating effects (22 percentage points) outweigh the contrary influences of both age and college among heavy viewers (16 percentage points both), but that the college experience reduces the cultivation effects among light viewers by a margin equal to or greater than TV's cultivation differentials.

Sex, education, and age. We have seen that women generally score higher on the "television answers" than men in the corresponding groups. We have also seen that college and age tend generally to reduce those scores. But while the level of education affects men's scores more than women's, age influences women more than men.

The differential effects of college and age on the television scores of men and women can be seen on Figure 11. College reduces the light viewing male score by 32 and the heavy viewing male score by 16 percentage points; the figures for women are 20 and 9 percentage points, respectively.

Age, on the contrary, has a greater and different influence on women. Unlike with men, heavy viewing increases the difference between the female

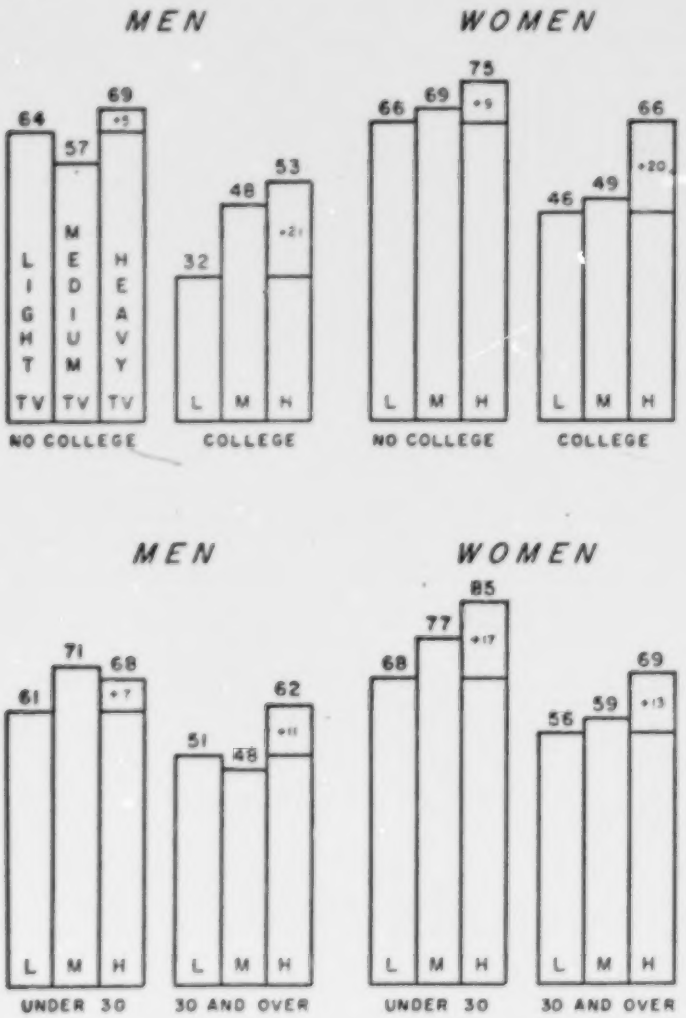

FIGURE 11

PERCENT OF HIGH CULTIVATION SCORES AND DIFFERENTIALS BY EDUCATION AND BY AGE FOR MEN AND WOMEN

age groups and makes the younger women stand out as the most vulnerable to the television view. These interactions can be further clarified by looking at the combined effects of age and education in each gender group.

Figure 12 shows these effects. The cumulative influences further extend the sex differences in the directions indicated before. College makes its

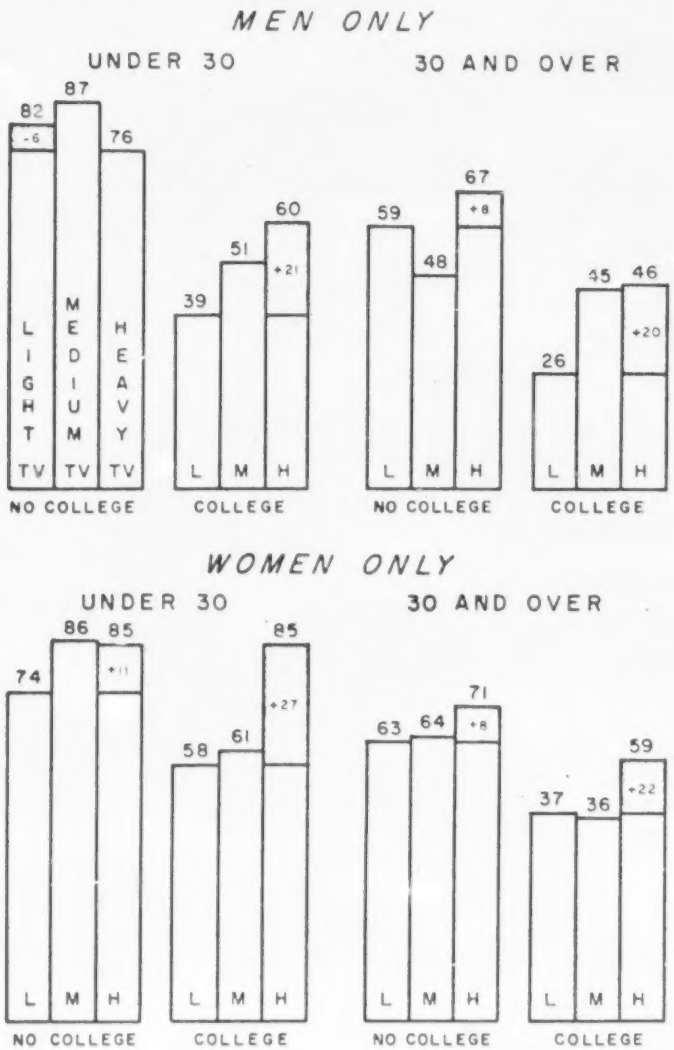

FIGURE 12

PERCENT OF HIGH CULTIVATION SCORES AND DIFFERENTIALS BY EDUCATION WITHIN TWO AGE GROUPS FOR MEN AND WOMEN

greatest impact on the cultivation scores of the older male light viewers. Television achieves its greatest cultivation differentials with the younger college women. That is also the group most resistant to the moderating influence of college upon the cultivation score. In fact, college education makes no difference at all in the scores of young women, heavy viewers, whereas it makes a large difference in other groups.

Newspaper reading

Table D-7 (in Part II) permits comparisons between responses of television viewers and different groups of newspaper readers. Some of these can be seen on Figure 13. The data from the purposive quota sample discussed earlier

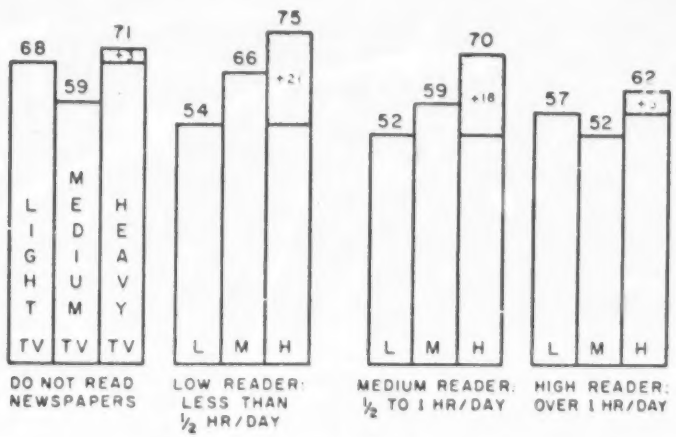

FIGURE 13

PERCENT OF HIGH CULTIVATION SCORES AND DIFFERENTIALS BY NEWSPAPER READING

indicated that newspaper reading (like being male, older, and better educated) tends to be associated with a reduction in the number of television viewers who score high on the cultivation questions. We can now also see that the light viewers of television were not affected by the amount of newspaper reading but that the heavy viewers were. The more the heavy TV viewer reads

the newspaper the smaller the cultivation differential, as well as the absolute score. But within each newsreading category, heavy viewers were more likely to give the "television answer" than the light viewers.

The data in Tables D-1 through D-7 represent the initial stages of analysis and cross-tabulation of the responses of the national sample. However, in their overall consistency and similarity to our earlier, less generalizable quota sample, they already afford valuable insight into some specific relationships between dimensions of television content and corresponding images of the world held by men and women, young and old, the more and less formally educated and the readers of newspapers who make up the audience of regular TV viewers.